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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/627,979

07/28/2003

Hideo Yokota

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EXAMINER

STREGE, JOHN B

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

07/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/627,979

Applicant(s)

YOKOTA ET AL.

Examiner

John B. Strege

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/28/03, 11/25/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example claim 1 discloses a first and second "judging of judging", and further claim 5 is completely incoherent with the repetition of the word frame, "wherein in judgement of allocation of the frame continuing with the part of the continuous frames and the frame from the frame that is in continuity with the frame onward, the frames from among a plurality of continuous frames from the frame previous to the one to be judged". These examples are repeated throughout the other independent claims as well.

3. Claims 1,2,4,13,16,22 and 25 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Claim 1,13, and 25 recite the limitation "the region of interest in the first frame" in lines 6-7. Although there is a region of interest defined in line 1, the region of interest is

not defined as being in the first frame, thus there is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 2 recites "wherein the first frame is either of one frame and a plurality of frames". The Examiner does not understand how one frame can possibly be a plurality of frames, thus will disregard "is either of one frame and a plurality of frames". The same is true of claims 8,14,20. Appropriate correction is required.

Claim 4 recites "the judging" on line 1. Because there are three different types of judgments described in the first claim, it is unclear which judging this claim is referring to thus it is ambiguous. The same is true of claims 10,16,22. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 13-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 13-24 define a computer program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed

Art Unit: 2624

computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamauchi USPN 7,110,583.

A method of extracting a region of interest from continuous frames of cross sectional images of an organism (figure 10), the continuous frames including a first frame, a second frame that is next to the first frame, third frame that is next to the second frame, and onward frames that are after the third frame (col. 15 lines 53-57), comprising: calculating an initial judgment criterion for the region of interest in the first frame (col. 15 line 58 – col. 16 line 12); a first judging of judging whether a specific region in the second frame is any one of inside and outside of the region of interest

based on the initial judgment criterion and values of pixels in the specific region (col. 16 lines 13-18); and a second judging of judging whether a specific region in the third frame and in the onward frames is any one of inside and outside of the region of interest based on values of pixels of regions that have been judged to be inside the region of interest in the previous frame (claim 15 lines 53-57 disclose that the process is repeated for each of the frames that make up the ultrasound image).

Regarding claim 2, Yamauchi discloses selecting the initial contour in accordance with the dialog with an operator (col. 4 lines 28-38).

Regarding claim 3, Yamauchi discloses setting a temporary region of interest in the frame under consideration at a position that is same as the region of interest in a frame previous to the frame under consideration, and judging whether each pixel that is adjacent to a boundary of the temporary region of interest is any one of inside and outside of the region of interest (see figures 22-23, and col. 15 line 58 – col. 16 line 12).

Regarding claim 4, Yamauchi discloses expanding the region of interest with respect to the region of interest of the previous frame, when a pixel to be allocated to the region of interest is outside of the temporary region, to thereby include the pixel under consideration inside of the region of interest in the frame under consideration, and contracting the region of interest with respect to the region of interest of the previous frame, when a pixel not to be allocated to the region of interest is inside of the temporary region, to thereby not include the pixel under consideration inside of the region of interest in the frame under consideration (col. 13 line 48-col. 14 line 19).

Regarding claim 5, the process of Yamauchi is iterative, thus whatever is applied to the second frame is applied to the further frames consecutively (col. 16 lines 13-17).

Regarding claim 6, Yamauchi discloses displaying the pixel values (col. 16 lines 24-31).

Claims 7-12 are similarly analyzed to claims 1-6.

Claims 13-18 are similarly analyzed to claims 1-6.

Claims 19-24 are similarly analyzed to claims 1-6.

Claim 25 is similarly analyzed to claim 1.

Regarding claims 26-27, Yamauchi discloses storing the pixel information and displaying the pixel values (col. 16 lines 24-31).

Claim 28 is similarly analyzed to claim 1.

Claims 29-30 are similarly analyzed to claims 26-27.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,995,763 Interactive Sculpting for volumetric exploration and feature extraction.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

Art Unit: 2624

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS



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